

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claim 1 (currently amended): An isolated antibody, or binding fragment thereof, ~~one of its functional fragments, said antibody or one of said fragments being capable of binding to the human insulin-like growth factor T-receptor IGF-IR and, if necessary, inhibiting the natural attachment of its ligands IGF1 and/or IGF2 and/or capable of specifically inhibiting the tyrosine kinase activity of said IGF-IR receptor,~~ comprising: a light chain ~~comprising at least one complementarity determining region (CDR) comprising CDR selected from the CDRs of sequence SEQ ID Nos. 2, 4 or and 6; and~~ or at least one CDR whose sequence has at least 80% identity after optimum alignment with the sequence SEQ ID No. 2, 4 or 6, or in that it comprises a heavy chain complementarity determining region (CDR) comprising at least one CDR selected from the CDRs of sequence SEQ ID Nos. 8, 10 and 12, wherein the antibody, or binding fragment thereof, binds to human insulin-like growth factor I receptor (IGF-IR) and inhibits binding of IGF1 and/or IGF2 to said IGF-IR ~~or at least one CDR whose sequence has at least 80% identity after optimum alignment with the sequence SEQ ID No. 8, 10 and 12.~~

Claims 2 - 17 (cancelled)

Claim 18 (withdrawn): An isolated nucleic acid, characterized in that it is selected from the following nucleic acids:

a) a nucleic acid, DNA or RNA, coding for an antibody, or one of its functional fragments, as claimed in claim 1;

b) a complementary nucleic acid of a nucleic acid such as defined in a);  
and

c) a nucleic acid of at least 18 nucleotides capable of hybridizing under conditions of great stringency with at least one of the CDRs of sequence SEQ ID No. 1, 3, 5, 7, 9 or 11, or with a sequence having at least 80% identity after optimum alignment with the sequence SEQ ID No. 1, 3, 5, 7, 9 or 11.

Claim 19 (withdrawn): A vector comprising 9 nucleic acid as claimed in claim 18.

Claim 20 (withdrawn): A host cell comprising a vector as claimed in claim 19.

Claim 21 (withdrawn): A transgenic animal with the exception of man comprising at least one cell transformed by a vector as claimed in claim 19.

Claims 22 - 29 (cancelled)

Claim 30 (currently amended) A composition comprising the antibody of claim 1, in a pharmaceutically acceptable carrier ~~by way of active principle a compound consisting of an antibody, or one of its functional fragments, as claimed in claim 1.~~

Claims 31 - 54 (cancelled)

Claim 55 (new): An isolated antibody or fragment thereof of claim 1, wherein said binding fragment is selected from the group consisting of Fv, Fab, F(ab')<sub>2</sub>, Fab', scFv, scFv-Fc and diabodies.

Claim 56 (new): A murine hybridoma, deposited with the CNM Institut Pasteur, under accession number I-2717.

Claim 57 (new): The antibody or fragment thereof of claim 1, wherein the light chain complementarity determining region (CDR) further comprises SEQ ID No. 54 and the heavy chain complementarity determining region (CDR) further comprises SEQ ID No. 69.

Claim 58 (new): The antibody or fragment thereof of claim 1, wherein said antibody is a chimeric antibody comprising the light chain and heavy chain constant regions derived from an antibody of a species heterologous to the mouse.

Claim 59 (new): The antibody or fragment thereof of claim 58, wherein the heterologous species is human.

Claim 60 (new): The antibody or fragment thereof of claim 59, wherein the light chain and heavy chain constant regions derived from a human antibody are respectively the kappa and gamma-1, gamma-2 or gamma-4 region.

Claim 61 (new): The antibody or fragment thereof of claim 1, wherein said antibody is a humanized antibody and comprises a light chain and/or a heavy chain in which the skeleton segments FR1 to FR4 of said light chain and/or heavy chain

are respectively derived from skeleton segments FR1 to FR4 of human antibody light chain and/or heavy chain.

Claim 62 (new): The antibody or fragment thereof of claim 1, wherein the light chain further comprises SEQ ID No. 61 or 65, and the heavy chain further comprises SEQ ID No. 75, 79 or 83.

Claim 63 (new): The antibody or fragment thereof of claim 62, wherein the light chain comprises SEQ ID No. 65 and the heavy chain comprises SEQ ID No. 79 or 83.

Claim 64 (new): The antibody or fragment thereof of claim 63, wherein the heavy chain comprises SEQ ID No. 83.

Claim 65 (new): A method of producing an antibody, comprising the steps of:

- a) culturing the hybridoma of claim 56 in a medium for production of an antibody; and
- b) recovering said antibody from the culture medium or said cultured hybridoma.

Claim 66 (new): A method for inhibiting or preventing cell transformation, the method comprising contacting a cell predisposed to transformation with an antibody of claim 1 or a composition as claimed in claim 30.

Claim 67 (new): The method for inhibiting or preventing cell transformation as claimed in claim 66, comprising administering to a patient in need of such treatment

an effective amount of the antibody or fragment thereof of claim 1 or a composition as claimed in claim 30.

Claim 68 (new): The method of claim 67, wherein the cell transformation is an IGF-dependent tumor cell and wherein the cell is selected from IGF1- and IGF2-dependent cells.

Claim 69 (new): A method for the prevention or treatment of cancer comprising administering to a patient in need thereof an effective amount of the antibody or fragment thereof of claim 1 or a composition as claimed in claim 30.

Claim 70 (new): The method of claim 69, wherein the cancer is selected from the group consisting of prostate cancer, osteosarcomas, lung cancer and breast cancer.

Claim 71 (new): The method of claim 70, wherein the prostate cancer is an androgen-independent prostate cancer.

Claim 72 (new): A method for targeting biologically active compound to cells expressing or overexpressing IGF-IR, the method comprising administering to a patient in need thereof an effective amount of the antibody or a fragment thereof of claim 1 or a composition as claimed in claim 30.

Claim 73 (new): A method of *in vitro* diagnosis a cancer induced by an overexpression of the IGF-IR receptor starting from a biological sample in which the abnormal presence of IGF-IR receptor is suspected, wherein the biological sample is contacted with an antibody, or a binding fragment thereof of claim 1.

Claim 74 (new): A kit for carrying out a method of diagnosis of a cancer induced by an overexpression of the IGF-IR receptor, wherein said kit comprises:

- a) an antibody, or one of a binding fragment thereof, of claim 1;
- b) optionally, reagents for the formation of the medium favorable to the immunological reaction;
- c) optionally, reagents allowing the demonstration of IGF-IR/antibody complexes produced by the immunological reaction.

Claim 75 (new): A kit for carrying out a process for the detection or the quantification of IGF-IR receptor expression in a biological sample, wherein said kit comprises:

- a) an antibody, or one of a binding fragment thereof, of claim 1;
- b) optionally, reagents for the formation of the medium favorable to the immunological reaction;
- c) optionally, reagents allowing the demonstration of IGF-IR/antibody complexes produced by the immunological reaction.

Claim 76 (new): The kit according to claim 75 for the detection or the quantification of an overexpression of the IGF-IR receptor in a biological sample.